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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/543,143	07/22/2005	Tae-Song Kim	KIST.2120.0001	7804
869860 7590 03/09/2010 North Star Intellectual Property Law, PC P.O. Box 34688 Washington, DC 20043				
EXAMINER				
CANDLER, SAMUEL M				
ART UNIT		PAPER NUMBER		
3739				
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03/09/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/543,143

Applicant(s)

KIM ET AL.

Examiner

SAMUEL CANDLER

Art Unit

3739

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-14 and 39-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-14 and 39-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/1/2010 has been entered.

Response to Amendment

2. This office action is responsive to the amendment filed on 2/1/2010. As directed by the amendment: claims 1, 3-4 and 39 have been amended and claims 43-46 are new. Claims 1, 3-14 and 39-46 are presently pending in the application.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the 'conduction current' must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 3-14 and 39-46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Namely, the 'conduction current' disclosed was not adequately disclosed in the written specification or the drawings. A 'flow of current' between the transmitting electrodes of the present invention is described in the written specification (p. 2 line 16 - p. 3 line 18 & p.5 line 18 - p. 6 line 7); however, nowhere is a 'conduction current' nor a 'movement of free electrons in a

conductor' (the Applicant's definition of a 'conduction current' as explained in the Arguments) described in the specification. One could not assume that this 'flow of current' is a 'conduction current' based on the specification. As disclosed, a 'flow of current' could also describe a 'displacement current,' which is cited in the prior art.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 3-6, 13, 39 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Brockway et al (U.S. PGPub 2002/0138009).
8. Re claims 1, 3, 13 and 39, Brockway et al discloses a sensor 400 (see paragraph [0055]; Figure 4) having first and second electrodes 405a-b (see paragraph [0055]; Figure 4) between which an electrical potential difference is generated (see paragraph [0023]) through supply of a conduction current (see paragraph [0052]) and from which a current flows through the human body to a receiver 410 (see paragraphs [0022] and [0055]; Figure 4) installed on the surface of the human body.
9. Re claim 5, Brockway et al discloses wherein the electrodes are transmitting information of a separate electrical medical device which would contain an internal circuit (see paragraph [0054]).
10. Re claims 4 and 6, Brockway et al discloses wherein the electrodes are insulated from each other (see paragraph [0053]).

11. Re claim 43, Brockway et al discloses controlling the output of the transmitting electrodes to be transmitted to the outside of the human body by a switching circuit 140 (see paragraph [0055]; Figure 4).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brockway et al. Brockway does not explicitly disclose any structural location for the electrodes on the sensor device. However, Brockway et al does state that 'structural, logical and electrical changes may be made without departing from the spirit and the scope of the present invention.' It is not shown that any disadvantage would be provided by simply reshaping or moving the electrodes and would therefore be obvious to place the electrodes of Brockway in different structural locations on the sensor device. Additionally, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place the electrodes to cover the ends of the sensor, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

14. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brockway et al in view of Bashiri et al (U.S. Patent No. 6,165,178). Brockway et al discloses that the transmitting electrodes are insulated from each other on the sensor

but fails to disclose the details of the materials of the insulating means. Bashiri et al teaches using polyethylene and parylene as electrically insulating materials (see col. 5 lines 35-40). Therefore, it would have been obvious to one of the skill in the art at the time of invention to 'fill in the gaps' of the device of Brockway et al with the details of the device of Bashiri et al.

15. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brockway et al in view of Yoshioka et al (U.S. Patent No. 5,651,869). Brockway et al discloses an electrode which would be made of a conductive material, but he fails to disclose the details regarding the materials of the electrode. Yoshioka et al discloses using gold as an electrical contact and that it is known in the art (see col. 4 lines 9-13). Therefore, it would have been obvious to one of the skill in the art at the time of invention to 'fill in the gaps' of the device of Brockway et al with the details of the device of Yoshioka et al.

16. Claims 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brockway et al in view of Holmes et al (U.S. Patent No. 4,267,415). Brockway et al discloses the communication circuit operating using a very low current conducted through the body to the remote receiver (see paragraph [0053]) but fails to disclose the details of how a low current is achieved. Holmes teaches a current limiting circuit that includes a resistor with a capacitor in parallel (see col. 3 lines 28-35; Figure 1). Therefore, it would have been obvious to one of the skill in the art at the time of invention to 'fill in the gaps' of the device of Brockway et al with the details of the device of Holmes et al.

Response to Arguments

17. Applicant's arguments filed 2/1/2010 have been fully considered but they are not persuasive.

18. Regarding the Arguments concerning 'a displacement current,' the Examiner respectfully disagrees. The Applicant points to the disclosure of Brockway et al as using a 'displacement current' instead of a 'conduction current' as now cited in the claims; however, the Examiner believes the Applicant has misinterpreted the disclosure of Brockway et al in view of claims 1 and 39. The currently amended claims cite 'a conduction current from a first transmitting electrode . . . and sinking the current to a second transmitting electrode.' The conduction current is between the two transmitting electrodes. The disclosure of Brockway cites 'intracorporeal conductive communication [displacement current] of data from electrodes 405a-b . . . to electrodes 410a-b.' This shows that the displacement current is not occurring between the two transmitting electrodes, but between the transmitting electrodes as a set and the receiving electrodes. The displacement current is a result of reactive coupling (see paragraph [0052]) caused by a conduction current through the body between the two transmitting electrodes. Thus, the device of Brockway et al still meets the limitation as claimed.

19. Regarding the Arguments concerning Brockway et al in view of claim 40, these Arguments are moot because claim 40 was not rejected under Brockway et al in the previous Office Action.

20. Regarding the Arguments concerning Brockway et al in view of the 'conduction current' in device claim 3, the Examiner respectfully disagrees. Claim 3 states that the

receiver is **configured to** receive a conduction current. This means a receiver **capable of** receiving a conduction current would meet the limitation of the claim as said receiver would be **configured to** receive a conduction current if the scenario arose. Therefore, the receiver 410a-b of Brockway et al would meet the limitations relating to a conduction current of claim 3 as the receiver contains electrodes which would be capable of receiving a conduction current.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references disclose devices that transfers current through the body from one electrode to another electrode:

U.S. PGPub 2006/0173265

U.S. Patent No. 5,796,827

U.S. Patent No. 7,463,918

U.S. Patent No. 7,425,202

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMUEL CANDLER whose telephone number is (571)270-3410. The examiner can normally be reached on Monday - Friday, 8 a.m. - 5 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on 571-272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SAMUEL CANDLER/
Examiner, Art Unit 3739

/John P Leubecker/
Primary Examiner, AU 3739